



## Federal Highway Administration (FHWA) Research and Technology Agenda

### Meeting the Challenge: Policy

Policy decisions made today will shape the highway transportation system of tomorrow. FHWA evaluates the impacts of a broad range of policy options and analyzes current and emerging issues that will affect the way transportation systems are built, maintained, and used.

Forecasting the effects of proposed legislation and policy decisions requires quality transportation data. FHWA provides guidance and tools, which standardize how transportation professionals collect data on highway system characteristics such as road types, funding methods, and travel patterns. Consistent national data provide a snapshot of today's transportation system that is essential for good policy and for projecting future requirements.

By keeping an eye on policy trends, FHWA helps its stakeholders and partners address current transportation challenges and anticipate future needs.

For example, FHWA's policy research initiatives refine current methods and procedures used to analyze the impacts, benefits, and costs of highway infrastructure investments. Through research studies that explore transportation topics pertinent to State, local, and Tribal governments, FHWA helps these entities identify and cooperatively address issues that may have budgetary and legislative implications. FHWA also promotes interagency collaboration and the sharing of program innovations by facilitating information exchanges between the United States, other countries, and international organizations.

#### **Objective: 1: Evaluate impacts of a broad range of policy options, and analyze current and emerging issues that will affect surface transportation programs.**

##### **Strategies**

- Research and evaluate policy strategies, alternatives, and outcomes that address current transportation challenges.
- Research emerging transportation policy issues and future challenges.
- Research and analyze transportation finance policy, revenue generation strategies, and technology issues.
- Update transportation models and technical tools used to examine transportation policy issues.
- Develop and deploy tools to assist State and local governments in adopting performance-management principles.
- Develop and refine microeconomic models, tools, and procedures for estimating the benefits and costs of highway and bridge investments and predicting the impact of such investments on future system conditions and operational performance.
- Develop macroeconomic tools and techniques for analyzing the effects of highway infrastructure on the national economy.

##### **Showcase Activities**

- Exploring the Relationship Between Travel Demand and Economic Growth
- Studying the Next Generation of Travelers
- Analyzing Interstate Revenue and Policy Options
- Conditions and Performance Report to Congress

##### **Exploring the Relationship Between Travel Demand and Economic Growth**

This study presents results of an assessment of the state of research on "decoupling" the relationship between vehicle travel and economic growth. In the United States, the long-term trend has been for vehicle travel, as measured in total vehicle miles traveled (VMT), to increase at similar rates as economic growth, as measured in gross domestic product. The goal of this study was to identify policies that have been successful at decoupling the two. It is important to learn whether some countries, States, regions, or local governments have been able to discourage growth in or even decrease vehicle miles traveled while simultaneously encouraging economic growth.

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<p><b>Studying the Next Generation of Travelers</b></p> <p>The future of personal travel will be influenced by a combination of various events, including: life-cycle changes; demographic and socioeconomic factors; generational social norms; and the adaptation of people to new technologies and travel options. The Transportation Futures team is conducting a formal study to examine the travel behavior of people under the age of 30, which will be used to develop policy recommendations based on improved forecasts of demand, vehicle usage, and the impacts of new transportation technologies on personal travel. The work completed under this project provides for both a quantitative and qualitative evaluation of current and emerging travel shifts among the different generations. Of particular interest are the impacts of new technologies and social trends that may be influencing mode choice, trip making, trip planning, and overall perceptions of vehicle travel among youths in the United States. The results of the analyses combined will be used to develop profiles of the next generation of travelers, and will be considered in the forecasting of future travel trends and travel scenario development. The information presented is ultimately intended to be used as a guide in the development of current and future transportation policies regarding personal travel.</p>	<p><b>Activity Contact</b></p> <p><b>Heather Rose</b> FHWA Office of Policy and Governmental Affairs Tel: 202-366-5060 Email: <a href="mailto:heather.rose@dot.gov">heather.rose@dot.gov</a></p> <p><b>Additional Resources</b></p> <ul style="list-style-type: none"> <li>• <a href="#">FHWA: Policy and Governmental Affairs Transportation Policy Studies</a></li> </ul>
<p><b>Analyzing Interstate Revenue and Policy Options</b></p> <p>The network of interstate highways in the United States is perhaps the greatest public works project of all time. Ensuring the long-term health of this invaluable asset is essential. However, the increasing cost and complexity of the Interstate Highway System threaten the ability of State highway agencies to keep up with growing maintenance and construction needs. FHWA is conducting a research study to develop and analyze options to improve, maintain, and preserve the Interstate Highway System. The result will be a greater understanding of the policy options for better fiscal management of the Interstate Highway System.</p>	<p><b>Activity Contact</b></p> <p><b>Mary Lynn Tischer</b> FHWA Office of Policy and Governmental Affairs Tel: 202-366-9232 Email: <a href="mailto:ml.tischer@dot.gov">ml.tischer@dot.gov</a></p>
<p><b>Conditions and Performance Report to Congress</b></p> <p>The biennial "Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance" Report to Congress provides Congress and other decision makers with an objective appraisal of the physical conditions, operational performances, and financing mechanisms of highways, bridges, and transit systems. Analyses are presented reflecting both on the current state of these systems and the projected future state of these systems under a set of alternative future investment scenarios. This report offers a comprehensive, data-driven background to support the development and evaluation of legislative, program, and budget options at all levels of government. It also serves as a primary source of information for national and international news media, transportation associations, and industry.</p>	<p><b>Activity Contact</b></p> <p><b>Ross Crichton</b> FHWA Office of Policy and Governmental Affairs Tel: 202-366-5027 Email: <a href="mailto:ross.crichton@dot.gov">ross.crichton@dot.gov</a></p>
<p><b>Objective: 2: Promote the efficient, systematic, and comprehensive collection and utilization of national transportation data to improve highway management and investment decisions.</b></p>	
<p><b>Strategies</b></p> <ul style="list-style-type: none"> <li>• Collect, maintain, and disseminate national transportation data to support decisionmakers.</li> <li>• Develop improved methods, procedures, guidelines, and technical tools for the collection and reporting of transportation data.</li> <li>• Develop new methods and approaches to present national transportation data, and to transform data into usable information and knowledge.</li> <li>• Develop and implement tools to link transportation datasets, thereby increasing utilization efficiencies and reducing the potential for data collection duplications.</li> <li>• Research remedies and preventative measures to eliminate and reduce Federal gas tax evasions in areas of diesel fuel usage.</li> </ul>	<p><b>Showcase Activities</b></p> <ul style="list-style-type: none"> <li>• Developing Standards, Procedures, and Methods to Promote Efficient, Systematic, and Comprehensive Transportation Data Collection</li> <li>• Providing Value-Added Analysis to National Transportation Data</li> </ul>

<p><b>Developing Standards, Procedures, and Methods to Promote Efficient, Systematic, and Comprehensive Transportation Data Collection</b></p> <p>Reliable, accurate, and comprehensive travel and transportation data form the foundation for effective transportation decisionmaking. However, collecting travel and transportation data has been a significant challenge due to differences in user needs, data sources, and collection methodologies among States. Changes in technology and data standards can also result in incompatibilities across agencies, further dampening data collection efforts. To address these challenges, FHWA is engaging in research efforts to develop national specifications for multiple transportation datasets, including vehicle classification, roadway functional classification, highway performance and monitoring, traffic monitoring, and household travel surveys. These efforts are expected to increase the effectiveness of agencies' data collection and analysis efforts, resulting in better consistency among datasets and improved data compatibility among government agencies and the private sector.</p>	<p><b>Activity Contact</b></p> <p><b>Tianja Tang</b>            FHWA Office of Policy and Governmental Affairs            Tel: 202-366-2236            Email: <a href="mailto:tianja.tang@dot.gov">tianja.tang@dot.gov</a></p>
<p><b>Providing Value-Added Analysis to National Transportation Data</b></p> <p>National transportation data provide a breadth of information on transportation systems, including temporal, geospatial, behavioral, and social economic aspects; however, these data items are systematic and related. Parameters such as vehicle miles traveled, fuel efficiency, fuel consumption, population, aging, immigration, and greenhouse gas emissions are interlinked. Unfortunately, such critical relationships are often poorly understood. Recent advancements in modeling, statistical analysis, and computing speed have enabled more detailed analysis of the interrelationships among these parameters. FHWA seeks to apply these advancements to national transportation data to help answer questions about the extent of demand for travel and how and why we travel. Greater understanding of these relationships can help the transportation community devise effective strategies, programs, and policies to anticipate and meet the public demand for transportation.</p>	<p><b>Activity Contact</b></p> <p><b>Tianja Tang</b>            FHWA Office of Policy and Governmental Affairs            Tel: 202-366-2236            Email: <a href="mailto:tianja.tang@dot.gov">tianja.tang@dot.gov</a></p> <p><b>Additional Resources</b></p> <ul style="list-style-type: none"> <li>• <a href="#">FHWA: Office of Highway Policy Information (OHPI) Publications and Products</a></li> </ul>
<p><b>Objective: 3: Research intergovernmental issues between States, cities, and Tribal governments that impact transportation policy decisions, budgetary processes, and legislative recommendations.</b></p>	
<p><b>Strategies</b></p> <ul style="list-style-type: none"> <li>• Organize cooperative research studies and work sessions on transportation topics facing Tribal governments.</li> <li>• Research policy trends in relationships between State, Federal, and Tribal transportation agencies.</li> </ul>	<p><b>Showcase Activities</b></p> <ul style="list-style-type: none"> <li>• Mission-Critical Legislation and Policy Analysis</li> </ul>
<p><b>Mission-Critical Legislation and Policy Analysis</b></p> <p>Mission-critical legislation and policy analysis support the FHWA, the U.S. Department of Transportation, and the U.S. Congress on legislative and policy development. Policy expertise is used in activities, such as providing technical assistance on surface transportation reauthorization legislation, conducting analyses in support of the Federal-aid Highway Program budget, and developing briefings for high-ranking agency and department officials. The Office of Legislative Affairs and Policy Communications also acts as the central point of contact between FHWA and Capitol Hill.</p>	<p><b>Activity Contact</b></p> <p><b>Lydia C. Conrad</b>            FHWA Office of Legislative Affairs and Policy Communications            Tel: 202-366-1243            Email: <a href="mailto:lydia.conrad@dot.gov">lydia.conrad@dot.gov</a></p> <p><b>Additional Resources</b></p> <ul style="list-style-type: none"> <li>• <a href="#">FHWA: Office of Legislative Affairs and</a></li> </ul>

**Objective: 4: Promote the exchange of highway technology and program innovations between the United States and foreign countries and organizations.**

**Strategies**

- Study, observe, and document technologies and practices used in other countries that could significantly improve highway transportation in the United States.
- Organize, facilitate, and participate in information exchanges, meetings, workshops, and conferences between the United States and international and foreign transportation entities.
- Coordinate and facilitate joint research and training activities between the United States and international and foreign transportation entities.

**Showcase Activities**

- Exchanging Solutions With Other Countries Through International Partnerships

**Exchanging Solutions With Other Countries Through International Partnerships**

FHWA's Office of International Programs supports the U.S. Department of Transportation's Strategic Plan through the Global Technology Exchange Program, which focuses on government-to-government relations and activities designed to promote the safe, secure, and efficient movement of people and cargo. The program facilitates technology exchange, information sharing, and partnering relationships between U.S. States and global counterparts in Asia, Europe, the Middle East, and the Western Hemisphere.

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**Additional Resources**

- [FHWA: Office of International Programs](#)
- [FHWA: Global Technology Exchange Program](#)

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